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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,584	10/29/2003	Theodore M. Khalili	203782000400	7687

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EXAMINER

JOHNSON III, HENRY M

ART UNIT	PAPER NUMBER
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3739

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/697,584

Applicant(s)

KHALILI, THEODORE M.

Examiner

Henry M Johnson, III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26, 28 and 29 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 030104.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Drawings***

This application lacks formal drawings. The informal drawings filed in this application are acceptable for examination purposes. When the application is allowed, applicant will be required to submit new formal drawings.

Claim Objections

Claim 15 is objected to because of the following informalities: the term fist joint is not adequately defined and the word rotates in line 6, should be rotate. Appropriate correction is required.

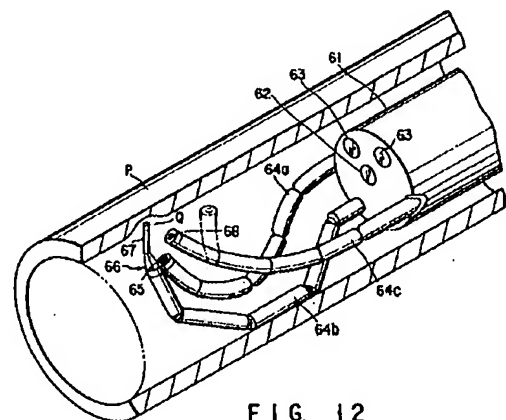
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 9, 11, 12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,624,380 to Takayama et al. Takayama et al. teach a manipulator with multiple degrees of freedom (abstract) that may be used in surgical applications (Col. 9, line 23). Multiple, robotic arms (Fig. 12) are extendable from an elongated body (Fig. 12, # 61), the arms comprising multiple joints for connecting multiple arm sections. Camera



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observation is provided in the body (Fig. 12, # 63) and on one of the arms (Fig. 12, # 65).

Claims 11, 12, 21-25, 28 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,368,015 to Wilk. Wilk discloses an automated surgical endoscopic instrument with a camera and two movable arms (Fig. 5, #'s 196 & 198) in separate chambers. Translatory drives (Fig. 5, #'s 216 & 218) provide axial movement of the arms from the body (Fig. 5, # 192). Wilk teaches multiple surgical tools attachable to the arms (Fig. 7). The method disclosed includes inserting the device into a body and activating the arms with tools (Col. 5, lines 15-20). Video images are provided (Col. 6, lines 30-35) and the surgeon operates the device (Col. 6, lines 1-6). Wilk discloses biopsy tools that inherently, dissect tissue. Laparoscopic procedures involve an incision. Wilk teaches the device for removal of a gallbladder (Col. 5, lines 13-15). For a biopsy or gallbladder procedure, the arms must operate in a coordinated manner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,624,380 to Takayama et al. in view of U.S. Patent 5,368,015 to Wilk. Takayama et al. are discussed above, but do not disclose the robotic arms deployable from within the body. Wilk discloses an automated surgical endoscopic instrument with a camera and two movable arms (Fig. 5, #'s 196 & 198). Translatory drives (Fig. 5, #'s 216 & 218) provide axial movement of the arms from the body (Fig. 5, # 192). It would have been obvious to one having ordinary skill in

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the art at the time the invention was made to use the tools as taught by Wilk in the invention of Takayama et al. as such tools are well known and pervasive in the art.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,624,380 to Takayama et al. in view of U.S. Patent 6,197,017 to Brock et al. Takayama et al. are discussed above, but do not disclose details of the joints for the arms. Brock et al. teach an articulated surgical manipulator with multiple joints for providing flexibility of movement. Shoulder rotation joints (Fig. 1, # 42), elbow joints (Fig. 1, # 44), free joints (Fig. 1, #'s 46 & 48), axial rotation joints (Fig. 1, # 50) and wrist joints (Fig. 1, #'s 52 & 54) are disclosed. A configuration where the rear arm moves radially outward and the forearm is near the center axis of the body is taught (Fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the various joints as taught by Brock et al. in the invention of Takayama et al. to provide additional dexterity. Takayama et al. teach using the device for coronary artery surgery, a procedure inherently requiring such dexterity.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,624,380 to Takayama et al. in view of U.S. Patent 6,197,017 to Brock et al. as applied to claim 7 above, and further in view of U.S. Patent 5,368,015 to Wilk. All are discussed above. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the tools as taught by Wilk in the invention of Takayama et al./Brock et al. as such tools are well known and pervasive in the art.

Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,368,015 to Wilk. Wilk discloses the claimed invention except for the diameter of the endoscopic device. It would have been an obvious matter of design choice to size the device according to the needed procedure, since such a modification would have involved a mere

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change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,368,015 to Wilk as applied to claim 11 above and further in view of U.S. Patent 5,624,380 to Takayama et al. Both are discussed above. Takayama et al. further teach three robotic arms (Fig. 12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the multiple arms as taught by Takayama et al. in the invention of Wilk to provide additional illumination or imaging of the working site.

Claims 15-17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,368,015 to Wilk in view of U.S. Patent 5,624,380 to Takayama et al. and further in view of U.S. Patent 6,197,017 to Brock et al. All are discussed above. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the joints as taught by Brock et al. in the invention of Wilk/Takayama et al. to provide additional dexterity. Wilk teaches using the device for gallbladder removal surgery, a procedure inherently requiring such dexterity.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,368,015 to Wilk in view of U.S. Patent 6,197,017 to Brock et al. Both are discussed above. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the joints as taught by Brock et al. in the invention of Wilk to provide additional dexterity. Wilk teaches using the device for gallbladder removal surgery, a procedure inherently requiring such dexterity.

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Allowable Subject Matter


Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry M Johnson, III whose telephone number is (571) 272-4768. The examiner can normally be reached on Monday through Friday from 6:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Henry M. Johnson, III
Patent Examiner
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